

REMARKS

Reconsideration of the above-identified patent application in view of the amendment above and the remarks below is respectfully requested.

No claims have been canceled or added in this paper. Claims 1 and 16-19 have been amended in this paper. Therefore, claims 1-19 are pending and under active consideration.

In the outstanding Office Action, the Patent Office states the following regarding the drawings:

New corrected drawings are required in this application because the spacing is not within the toleration for the margins, as well as the drawings are overlapping. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

In response to the above, Applicants are submitting herewith corrected drawings that address the issues raised by the Patent Office. Accordingly, the requirement has been met and should be withdrawn.

Also in the outstanding Office Action, the Patent Office has suggested that Applicants follow certain “guidelines [illustrating] the preferred layout for the specification of a utility application.”

In response to the above, Applicants note that the guidelines in question are not requirements, but rather, are merely suggestions. Nevertheless, Applicants have amended the specification so that the specification is in accordance with the suggested guidelines.

Claims 1-15 and 19 stand rejected under 35 U.S.C. 112, second paragraph, “as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.” In support of the rejection, the Patent Office states the following:

The claim section of claim 1, “wherein each of the optical fibers can be controlled by light and/or light can be coupled to these fibers, independently of one another,” is vague and indefinite. It is unclear which part the “independently of one another” is referring to. The broadest reasonable interpretation of the claims will be used in the following rejections. Claim 19 is rejected under the same broad and indefinite language.

Applicants respectfully traverse the foregoing rejection. Claims 1 and 19 have been amended herein so that it is clear to what “independently of one another” is referring. Accordingly, for at least the above reasons, the foregoing rejection should be withdrawn.

Claims 17 and 18 stand rejected under 35 U.S.C. 112, second paragraph. In support of the rejection, the Patent Office states the following:

Regarding claim 17, the phrase “i.e.” renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d). Also in claim 17, there is insufficient antecedent basis for “the” before “DNA or PNA synthesis.” In claim 18, there is insufficient antecedent basis for “the” before “DNA or PNA chips.” Correction is required.

Applicants respectfully traverse the foregoing rejection. Claim 17 has been amended herein so that “i.e.” is no longer recited. In addition, claims 17 and 18 have been amended so that the issues regarding antecedent basis for “the” before “DNA or PNA synthesis” in claim 17 and “DNA or PNA chips” in claim 18 has been rendered moot. Accordingly, for at least the above reasons, the foregoing rejection should be withdrawn.

Claims 7, 13-15 and 17-18 stand rejected under 35 U.S.C. 112, second paragraph, “but are otherwise deemed as allowable over the relevant prior art, if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The relevant prior art does not

teach or reasonably suggest an optical fiber apparatus and method as claimed for exposing of DNA or PNA chips, or the like.”

Applicants acknowledge with appreciation the Patent Office’s statement that 7, 13-15 and 17-18 are allowable over the prior art. With respect to the instant rejection, Applicants respectfully traverse and respectfully submit that claims 7, 13-15 and 17-18 are definite. Accordingly, for at least the above reasons, the foregoing rejection should be withdrawn.

Claims 1-6, 8, 9, 12, 16 and 19 stand rejected under 35 U.S.C. 102(b) “as being anticipated by Goodman et al. U.S.P. No. 5,968,036.” In support of the rejection, the Patent Office states the following:

Goodman et al. U.S.P. No. 5,968,036 teaches (ABS, Figs. 9 and 10, column 12, line 30 through column 12, line 52) and apparatus (and inherent method of using the same) for the photolithographic exposure of a biological substance 52, using at least one light source (46,54), a bundle of light fibers, and control unit 62, where light is coupled to each fiber (48,58) independently. Regarding claim 4, 56 switches between the laser, fiber, and analyzer. Regarding claims 8 and 9, see sensor/detector 49. Regarding claim 12, static masks are used.

Applicants respectfully traverse the foregoing rejection. Claim 1, from which claims 2-6, 8, 9 and 12 depend, has been amended herein to more clearly define the subject matter which applicants regard as the invention and now recites “[a] device for the synthesis of oligonucleotide arrays by photolithographic exposure of a surface, comprising:

at least one light source,

a plurality of light guided optical fibers, and

a control unit, wherein each of the optical fibers can be controlled independently of one another by light and/or light can be coupled to each of the optical fibers independently of one another.”

Thus amended, claim 1 is neither anticipated by nor rendered obvious over Goodman et al. for at least the reason that Goodman et al. does not teach or suggest, among other things, a device for the synthesis of oligonucleotide arrays by photolithographic exposure of a surface. Instead, Goodman et al. is limited in its teachings to a technique and apparatus for laser dentistry in which pulsed ultraviolet light is used to selectively remove tooth material.

Claim 16, from which claim 19 depends, is patentable over Goodman et al. for at least the same types of reasons discussed above.

Accordingly, for at least the above reasons, the foregoing rejection should be withdrawn.

Claims 10 and 11 stand rejected under 35 U.S.C. 103(a) “as being unpatentable over Goodman et al. U.S.P. No. 5,968,036.” In support of the rejection, the Patent Office states the following:

Goodman et al. U.S.P. No. 5,968,036 teaches (ABS, Figs. 9 and 10, column 12, line 30 through column 12, line 52) an apparatus (and inherent method of using same) for the photolithographic exposure of a biological substance 52, using at least one light source (46,54), a bundle of light fibers, and control unit 62, where light is coupled to each fiber (48,58) independently. Goodman et al. ‘036 does not explicitly teach the use of specific detectors, or dynamic masks. Regarding claim 10, since CCD detectors are well known in the art to detect optical signals, it would have been an obvious modification at the time the invention was made to one having ordinary skill in the art to use any well known detector for the purpose of sensing an optical signal, such as CCD detectors. Regarding claim 11, since dynamic masking devices are well known in the art for changing and varying the intensities and angles on optical exposures, it would have been obvious to a person having

ordinary skill in the art at the time the invention was made to use dynamic masks for the purpose of quickly changing exposure parameters.

Applicants respectfully traverse the foregoing rejection. Claims 10 and 11 depend from claim 1. Claim 1 is patentable over Goodman et al. for at least the reasons discussed above. Therefore, based at least on their respective dependencies, claims 10 and 11 are patentable over Goodman et al.

Moreover, Applicants respectfully submit that there would have been no motivation for one of ordinary skill in the art to modify Goodman et al. to include the use of CCD detectors, CCD cameras or a dynamic mask.

Accordingly, for at least the above reasons, the foregoing rejection should be withdrawn.

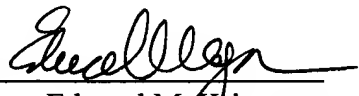
In conclusion, it is respectfully submitted that the present application is now in condition for allowance. Prompt and favorable action is earnestly solicited.

If there are any fees due in connection with the filing of this paper that are not accounted for, the Examiner is authorized to charge the fees to our Deposit Account No. 11-1755. If a fee is

required for an extension of time under 37 C.F.R. 1.136 that is not accounted for already, such an extension of time is requested and the fee should also be charged to our Deposit Account.


Respectfully submitted,

Kriegsman & Kriegsman

By: 
Edward M. Kriegsman
Reg. No. 33,529
665 Franklin Street
Framingham, MA 01702
(508) 879-3500

Dated: May 4, 2004

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Fee Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on May 4, 2004.


Edward M. Kriegsman
Reg. No. 33,529
Dated: May 4, 2004